

# ErUM:

# Exploration of the Universe and Matter

Annual Meeting of the BMBF Collaborative Research Center (ErUM-FSP) LHCb

Dr. Maren Meinhard

22<sup>nd</sup> September 2024



DESY  
PROJEKTRÄGER

# ErUM: Exploration of the Universe and Matter

## Topical overview

01 BMBF & PT.DESY

02 Framework programme: ErUM

03 Current activities in the ErUM field “Particles”

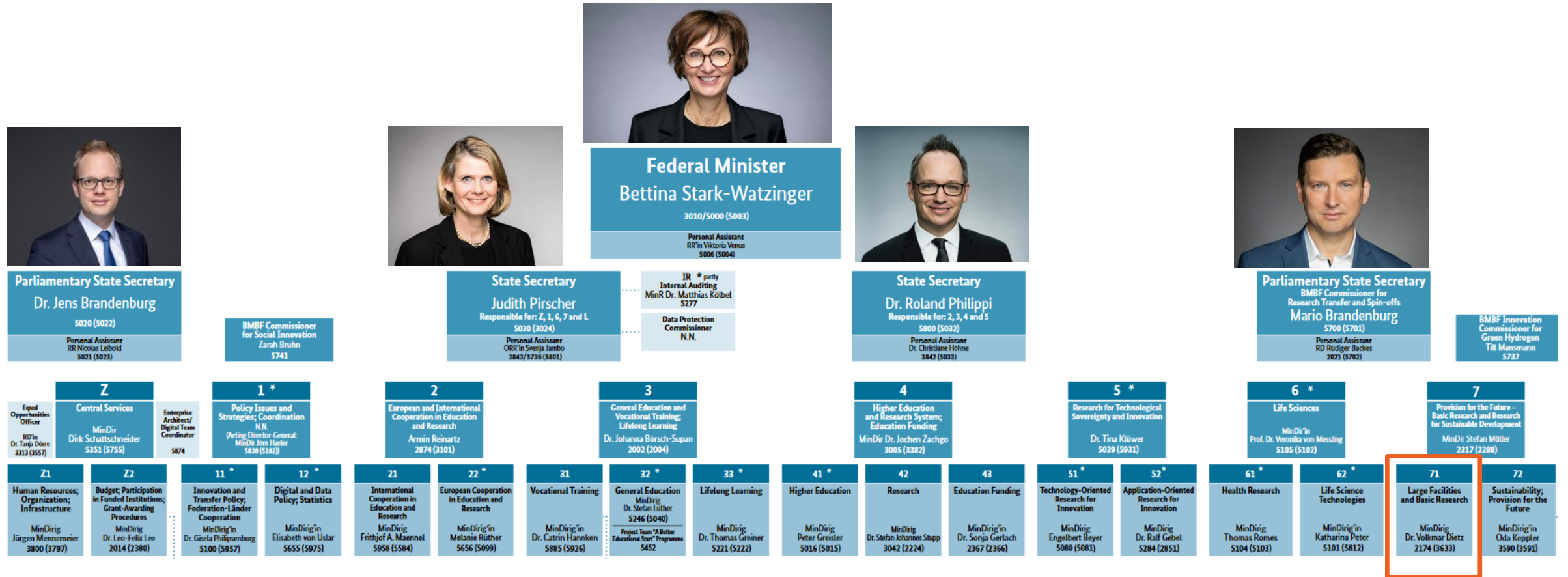
# BMBF & PT.DESY



DESY  
PROJEKTRÄGER

# Who is who in ErUM

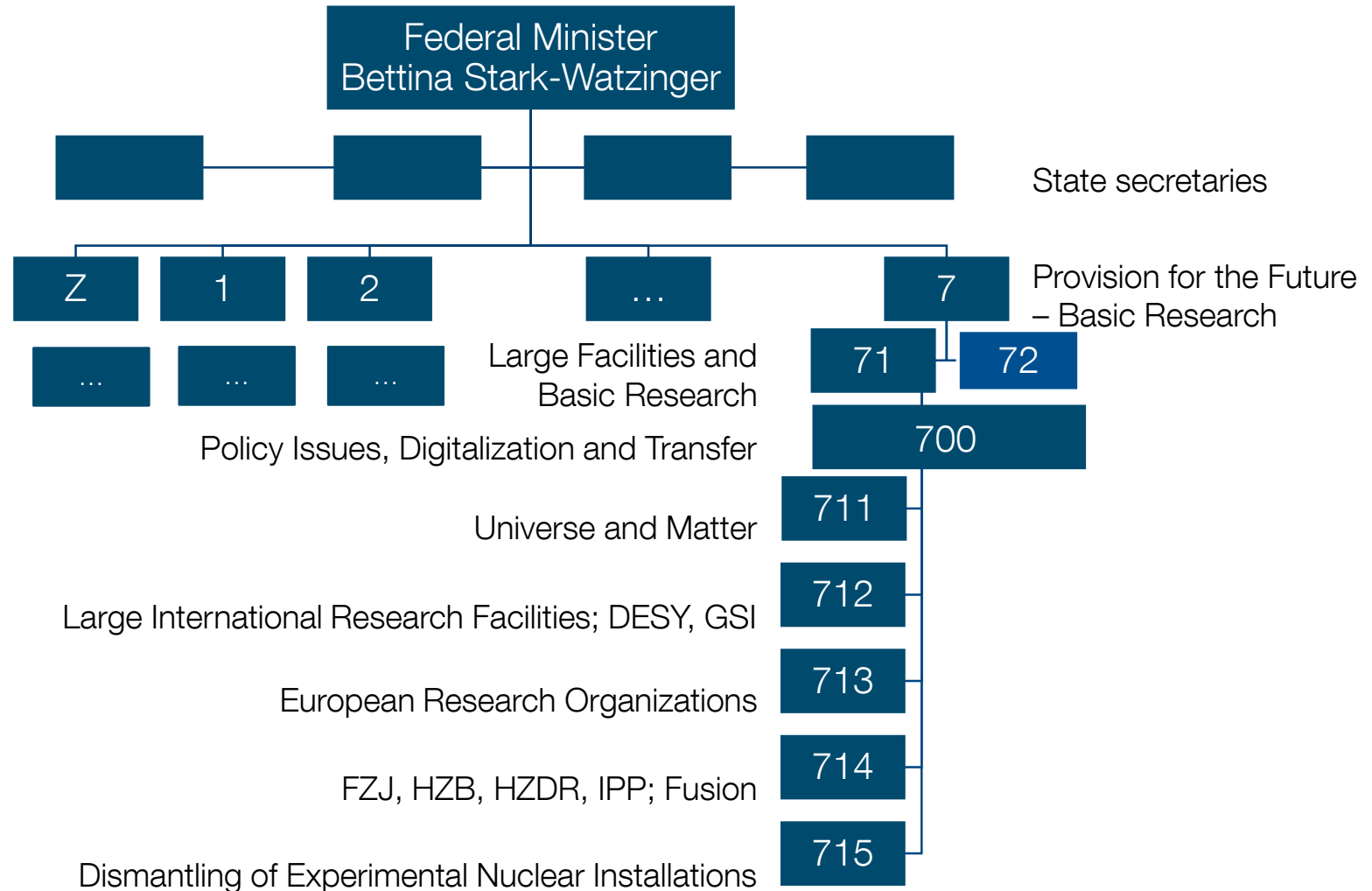
The Federal Ministry of Education and Research (BMBWF)



Directorate 71 (V. Dietz):  
Large Scale Facilities and Basic Research

# Who is who in ErUM

The Federal Ministry of Education and Research (BMBWF)



# Who is who in ErUM

DESY Projektträger: Project management for sub division 71

The screenshot shows the PT.DESY website interface. On the left is a navigation menu with items: PT.DESY HOME, WER WIR SIND, WAS WIR LEISTEN, BEKANNTMACHUNGEN, FÜR ZUWENDUNGSEMPFÄNGER (highlighted), KARRIERE, and KONTAKT. The main header includes the DESY logo, the text 'Deutsches Elektronen-Synchrotron DESY Ein Forschungszentrum der Helmholtz-Gemeinschaft', and the URL 'pt.desy.de'. Below the header is a blue banner with 'PT.DESY | DESY Projektträger'. The main content area features the breadcrumb 'PT.DESY Home / Für Zuwendungsempfänger /' and the title 'Für Zuwendungsempfänger'. A text block states: 'Wir begleiten Sie auch bei der Durchführung Ihres geförderten Projekts bis zum Abschluss. Hier finden Sie Hinweise und Antworten zu FAQs sowie Formulare zum Download.' Below this are two featured articles: 'Allgemeine Hinweise' with a subtext 'Hier finden Sie Hinweise während der Projektlaufzeit' and 'Reisen nach außerhalb Europas' with a subtext 'Eine zusätzliche Beantragung ist nicht mehr notwendig.' On the right side of the main content, there is an 'Infos' section with links to: BMBF-Förderportal, easy-online Antragssystem, profi-Online Verwaltung, Upload-Server, and Intern.



# Framework programme ErUM



# ErUM: Exploration of the Universe and Matter

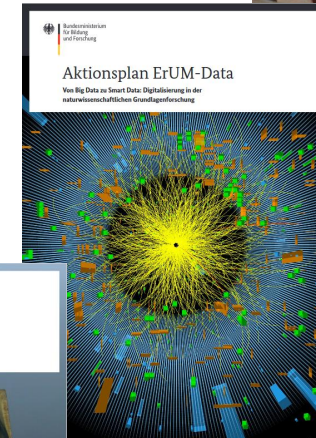
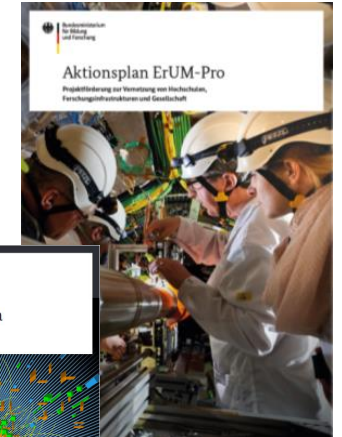
BMBF framework programme and action plans for basic research

Strategic and thematic framework for basic research at large-scale facilities



Action Plans

- 2018: ErUM-Pro
- 2020: ErUM-Data
- 2023: ErUM-Transfer





# Midterm Evaluation

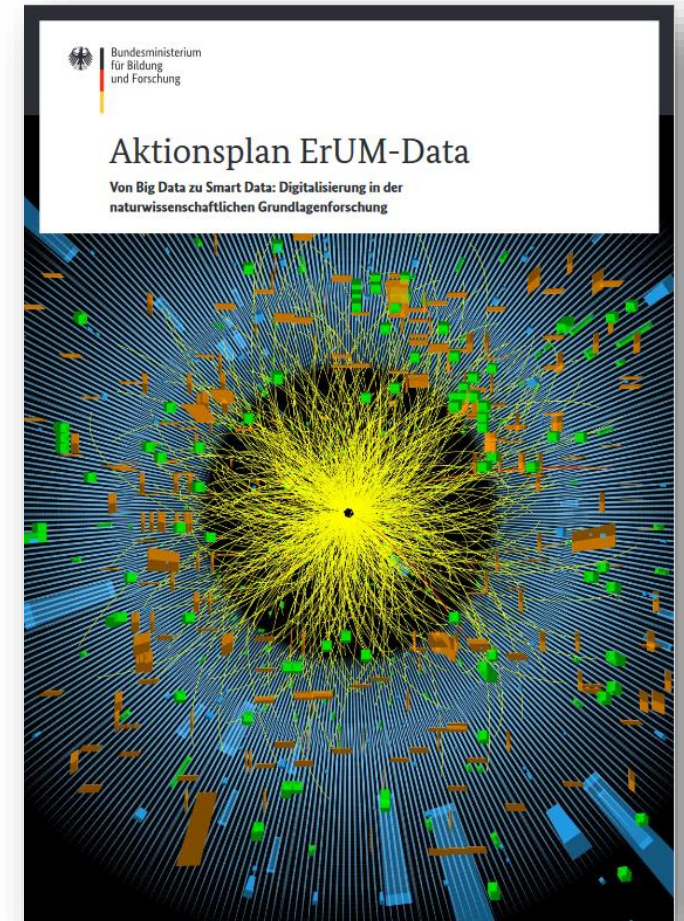
of the BMBF framework program ErUM

- Conducted by Technopolis Group with Science-Metrix & Nationales Institut für Wissenschaftskommunikation (NaWik)
- Main focus on project funding procedure and outcome
- E. g. bibliometry, online surveys, case studies - e. g. LHC key research hubs (ErUM Forschungsschwerpunkte – ErUM-FSP)
- Research projects in 2017 – 2022 considered
- ErUM evaluation finalized:
  - Final report will be publicly available
  - Many positive findings
  - Recommendations for advancement of ErUM



# Funding call ErUM-Data

- Funding period 10/01/2025-09/30/2028
- Prisma strategy meeting was held on 23rd/24th January 2024 in Hamburg
- One funding call (Förderrichtlinie) with three pillars:
  - Software and algorithms with a focus on AI and machine learning
  - Research data management
  - Federated infrastructures
- Single stage process
- Announcement to be expected in September/October 2024
- Application deadline: 15th January 2025



# ErUM-Transfer

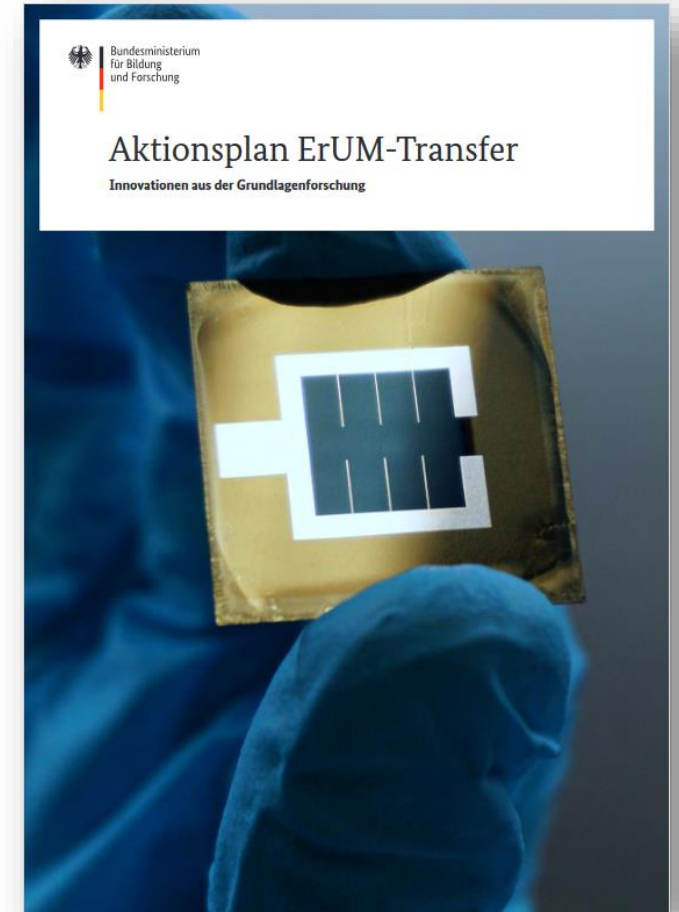
## Concept and implementation

### Concept

- Preserving the unique character of fundamental research
- Promote transfer in society and economy through specific measures: Address needs and close existing "gaps"
- Use the enormous pool of knowledge, methods and technologies of basic science @ research infrastructures more quickly
- Encourage close cooperation of researchers from academia and industry already at an early stage of development

### Current status: "pilot projects"

- Eight "pilot projects" have started in 2023/2024
- Project in "Particles":  
HVHFSSS – novel switch modules for use in accelerator systems



# Sustainability in basic research at Research Infrastructures (RI)

Second Prisma Trialogue in May 2024

## Triologue

- Representatives of universities, research institutions and BMBF
- Discussion of the results of four working groups; topics:
  - Planning and organization of research
  - Data and Computing
  - Technologies at Research Infrastructures (RI)
  - Research for sustainability
- Results of the trialogue were summarized in a recommendation paper and made available to the BMBF

## Next step

- October 2024: Trialogue results will be discussed and finalized with Prisma Forum (strategic advisory board for ErUM)



Prisma  
Triologue

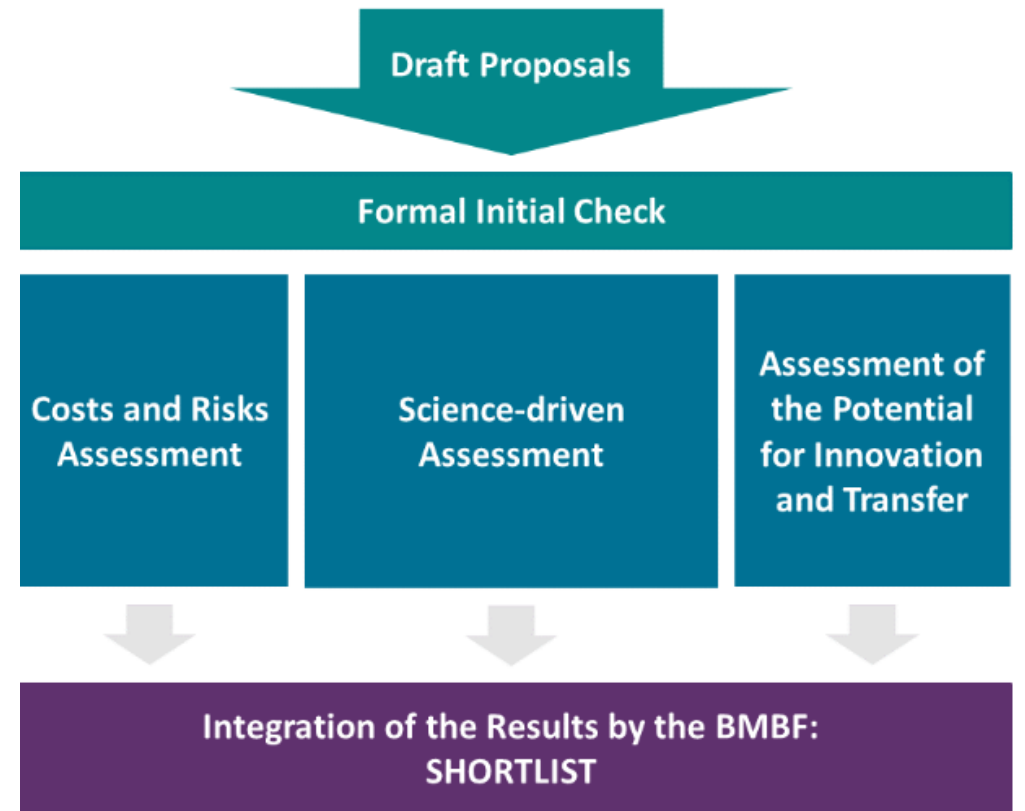


Prisma  
Forum

# National prioritisation process

## for large Research Infrastructures (RI)

- New assessment process of plans for potential ...
  - new large RI
  - substantial upgrade of RI
  - new involvement in international RI
- Succession of the former “RI Roadmap Process”
- Deadline for submission of short proposals: **25.10.2024**
- Assessment by: German Science and Humanities Council (WR) + panels of external & international experts
- Prioritisation by BMBF → SHORTLIST publication in summer 2025
- Future aim: maintain prioritisation process on a regular basis



SHORTLIST:

prioritised implementation of RI;

decision-making process will follow...

# Current activities in the ErUM field “Particles”



# Happy Birthday

70<sup>th</sup> anniversary of CERN

Forschungszentrum  
**CERN** wird **70**  
 – Berlin feiert mit!

1954-2024  
 JAHRE CERN

www.cern70.de

**„Creazione“**  
 eine Oper über Schöpfung und Urknall  
 01.09.2024, 18 Uhr, Gedächtniskirche

**„CERN Stories“**  
 ein Talkabend von und mit Forschenden vom CERN  
 02.09.2024, 19.30 Uhr, Futurium

**Ausstellung**  
 Mitmach- und Experimentier-Ausstellung  
 zu Urknall, Teilchenbeschleunigern & mehr  
 02.–04.09.2024, 10.00–18.00 Uhr, Futurium



Quelle: Marius Hoffmann



Quelle: Chetna Krishna

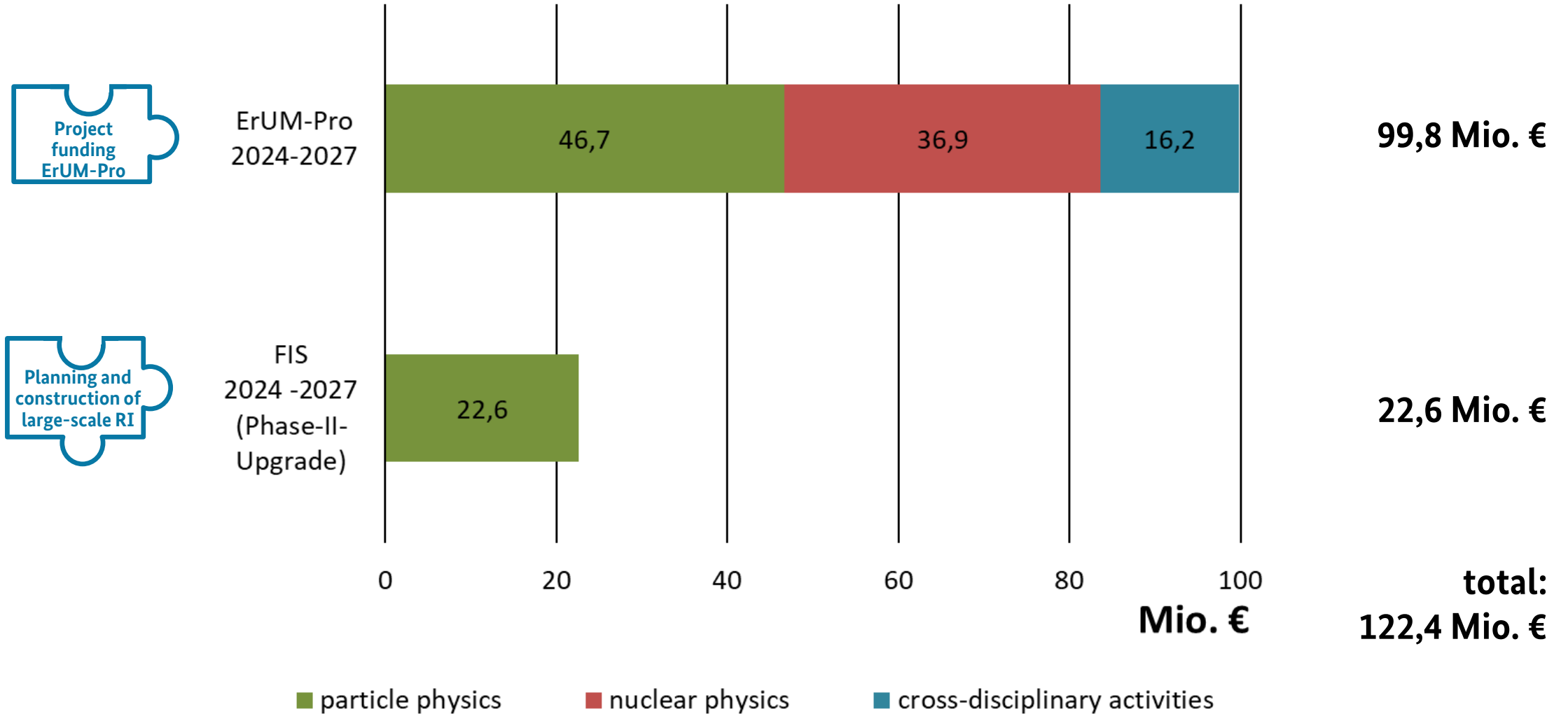


Quelle: Marius Hoffmann



# Priorities in the ErUM field “Particles”

Project funding 2024-2027

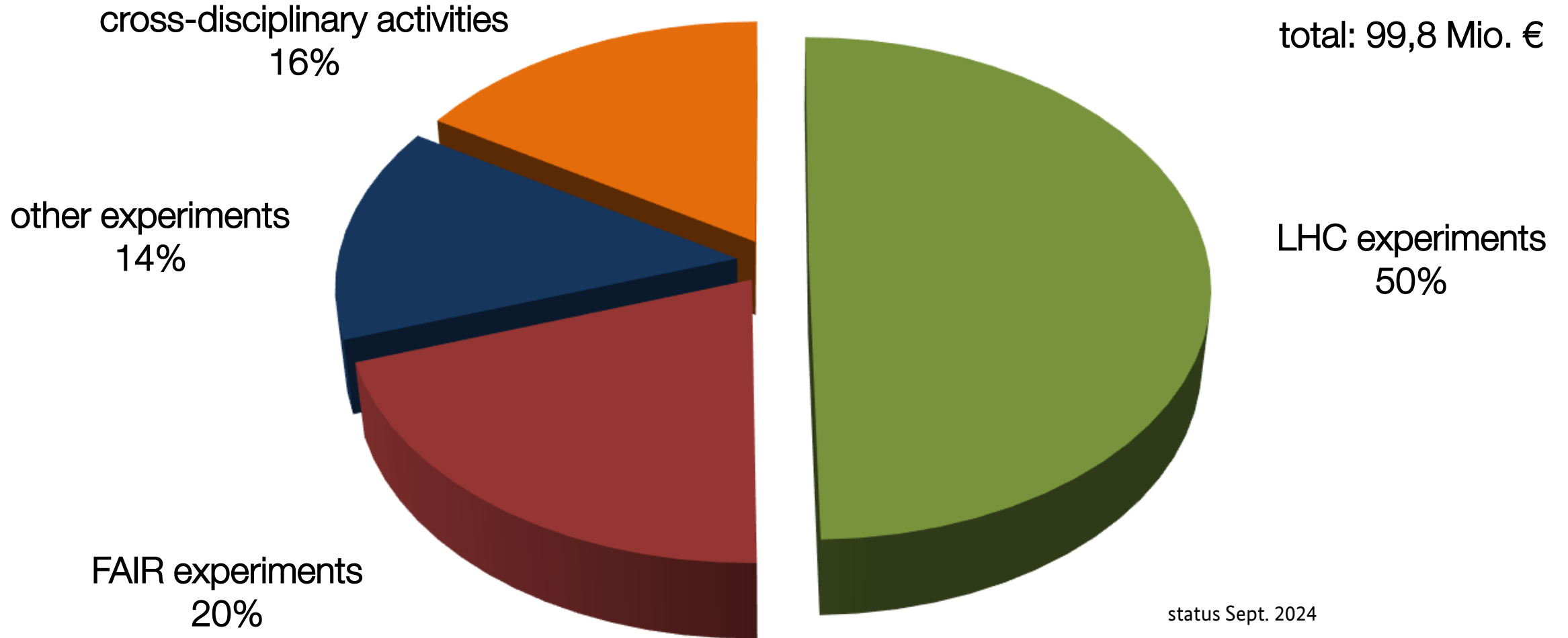


status Sept. 2024



# Current Priorities ErUM Field “Particles”

Project funding ErUM-Pro 2024-2027



# Elementary Particle Physics

Project funding ErUM-Pro 2024-2027



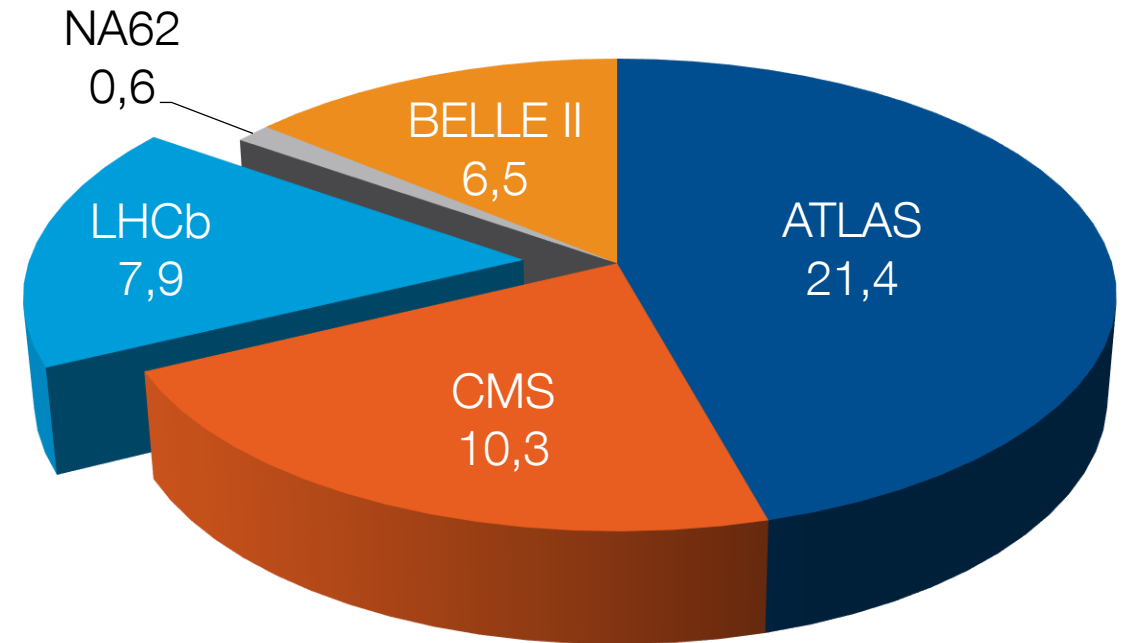
total: 47 Mio. €

## BMBF priorities:

- experiment: operation/service
- method dev. and data analysis

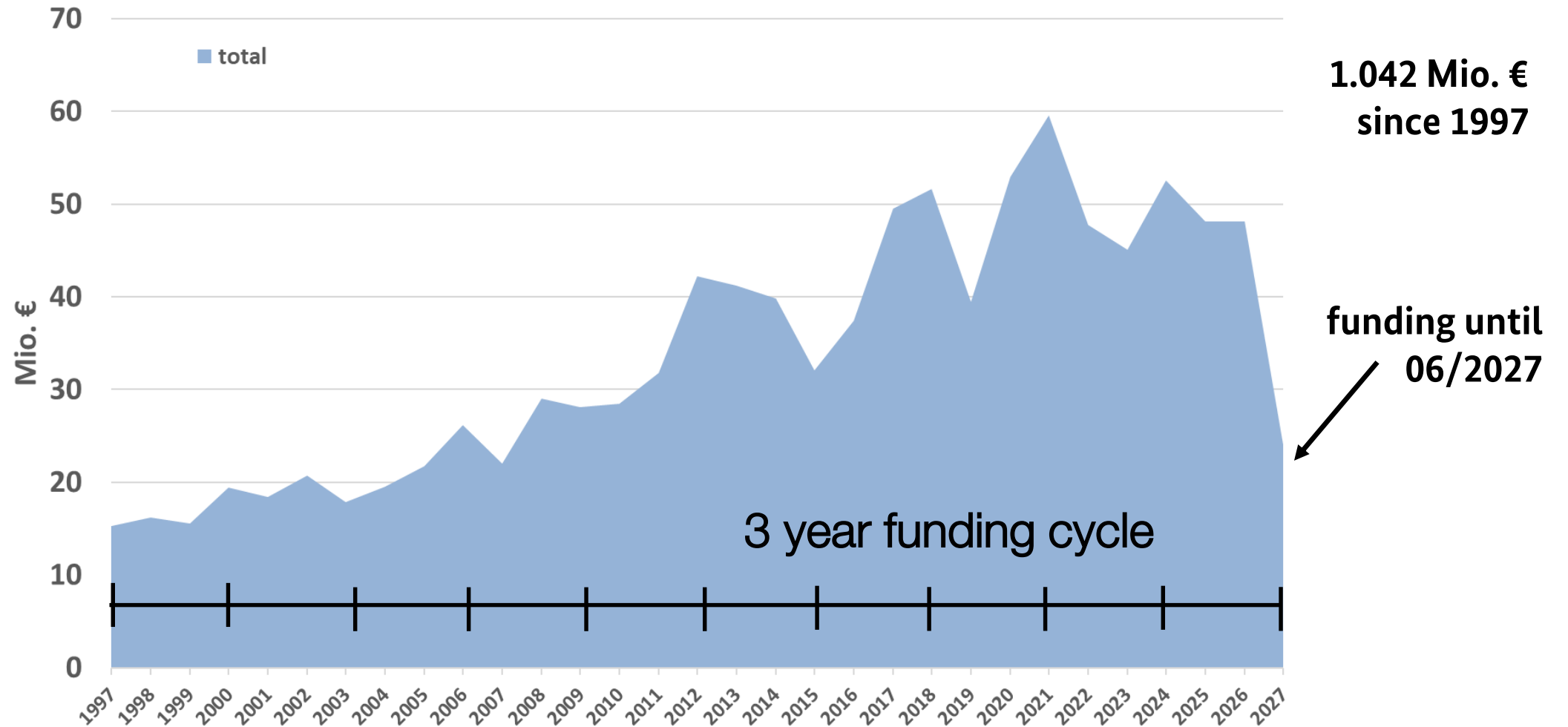
## ErUM-Pro:

- LHCb (incl. theory, FSP): 7,9 Mio. €



status Sept. 2024

# ErUM Field “Particles” since 1997



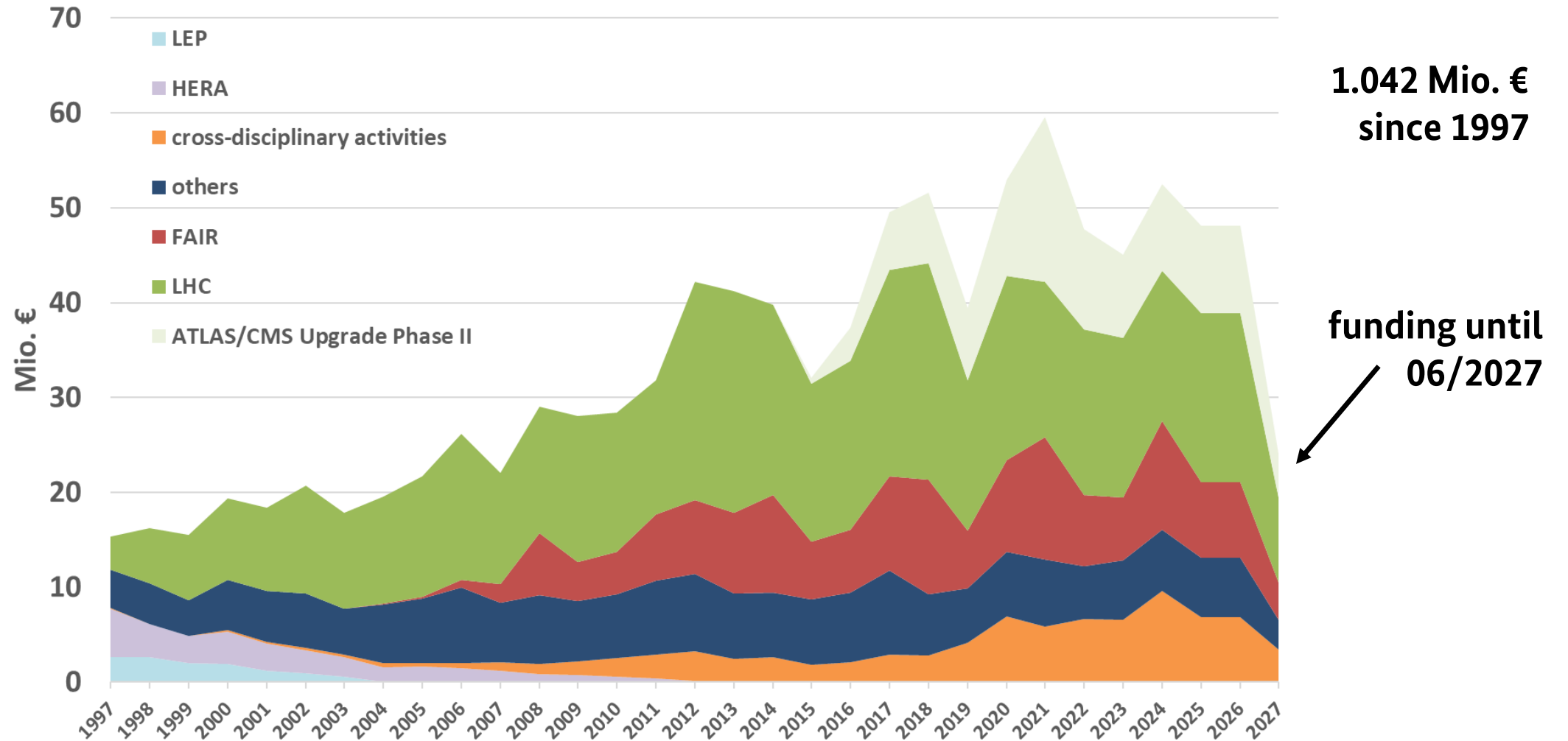
**1.042 Mio. €  
since 1997**

**funding until  
06/2027**

**3 year funding cycle**

status Sept. 2024

# ErUM Field “Particles” since 1997



**1.042 Mio. €  
since 1997**

**funding until  
06/2027**

status Sept. 2024

**Thank  
you**

## Kontakt

Deutsches Elektronen-Synchrotron DESY  
DESY Projektträger

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